

CLAIMS

What is claimed is:

1. A system for processing textures for a graphical image on a display, the graphical image including an object, the object including a plurality of fragments, the system comprising:

a memory for storing a portion part of a program for processing a plurality of texture portions for the plurality of fragments; and

a plurality of texture processors coupled with the memory, each of the plurality of texture processors for processing a portion of the plurality of texture portions for a fragment of the plurality of fragments in accordance with the program, the plurality of texture processors capable of processing a second portion of the plurality of texture portions in parallel.

2. The system of claim 1 further comprising:

a distributor coupled to the plurality of texture processors for distributing the plurality of texture portions to the plurality of texture processors.

3. The system of claim 2 further comprising:

an argument decoder for providing the plurality of texture portions to the distributor and for performing at least one operation on a third portion of the plurality of texture portions.

1 4. The system of claim 1 wherein the memory further includes a cache.

1 5. The system of claim 1 wherein each of the plurality of texture processors
2 further includes:

3 bitwise logic,

4 a multiplier-adder coupled with the bitwise logic; and

5 a summer coupled with the multiplier-adder; and

6 a selection means coupled with the bitwise logic, the multiplier-adder, and the
7 summer, for selecting a resultant from the bitwise logic, the multiplier-adder, and the
8 summer.

1 6. The system of claim 1 wherein the plurality of texture portions is provided
2 from at least one texture map.

1 7. The system of claim 6 wherein the display includes a plurality of pixels,
2 wherein the plurality of fragments intersect a portion of the plurality of pixels, wherein the
3 plurality of texture portions are a plurality of texels and wherein each of the plurality of
4 texture processors receive at least one texel of the plurality of texels and at least one
5 interpolated value as inputs.

1 8. A method for processing textures of a graphical image on a display, the
2 graphical image including an object, the object including a plurality of fragments, the
3 method comprising the steps of.

4 (a) providing a plurality of texture portions for the plurality of fragments to a
5 plurality of texture processors, the plurality texture processors for processing a portion of the
6 plurality of texture portions in parallel; and

7 (b) processing the plurality of texture portions in the plurality of texture
8 processors based on at least one program.

9 9. The method of claim 8 wherein the providing step (a) further includes the
10 step of:

11 (a1) providing the plurality of texture portions from a distributor coupled to the
12 plurality of texture processors.

13 10. The method of claim 9 further comprising the step of:

14 (c) performing at least one operation on a texture portion of the plurality of
15 texture portions prior to providing the texture portion to a texture processor of the plurality
16 of texture processors.

17 11. The method of claim 8 further wherein the fragment includes a program
18 identification, and wherein the method further includes the step of:

19 (c) fetching a portion of the program using the program identification.

20 12. The method of claim 8 wherein the processing step (b) further includes the
21 step of:

22 (b1) blending the plurality of texture portions in the plurality of texture processors

based on the at least one program.

13. The method of claim 12 wherein the plurality of texture portions are a plurality of texels, wherein each of the plurality of texture processors receive at least one texel and at least one interpolated value as inputs.